

What is the PBT Profiler?

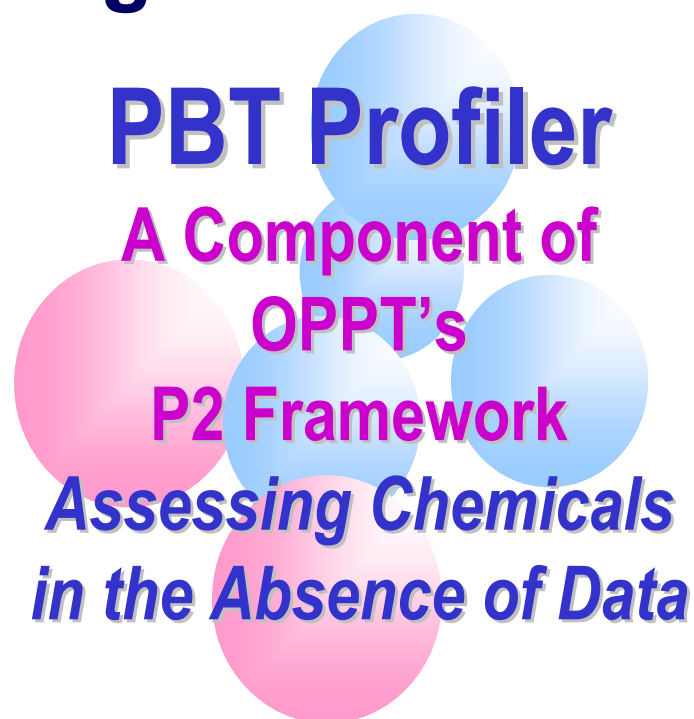
- ✚ Automated PBT screening tool

- ✚ Supports EPA's PBT Initiative

- ✚ Predicts properties based on structure

- ✚ Color coded results

- ✚ No cost for use & Internet-based



What Does the PBT Profiler Do?

- + Estimates **P**ersistence,
Bioconcentration potential, fish
chronic **T**oxicity from structure
- + Estimates environmental fate
and media half-lives
- + Compares estimations to EPA
criteria for P, B, & T

P, B & T Criteria

P ersistence	Not Persistent	Persistent	
Water, soil, sediment (EPA New Chemical Program Criteria)	< 60 d	≥ 60 d	> 180 d
Air (TRI Criteria)	≤ 2 d	> 2 d	

B ioaccumulation	Not Bioaccumulative	Bioaccumulative	
Fish BCF (EPA New Chemical Program Criteria)	< 1,000	≥ 1,000	≥ 5,000

T oxicity	Not Toxic	Toxic	
Fish ChV (EPA New Chemical Program Criteria)	> 10 mg/L Or No Effects at Saturation	< 10 mg/L	< 1.0 mg/L

Results for a Non-PBT Chemical

Three Tiers of Results are Displayed

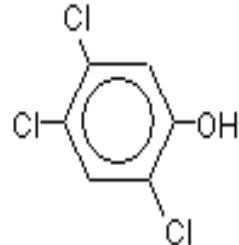
95-95-4 Phenol, 2,4,5-trichloro-

PBT Profiler Estimate = **PBT**

(1) Summary Results

<u>Media</u>	<u>Half-Life</u> (days)	<u>Percent in</u> <u>Each Medium</u>	<u>BCF</u>	<u>Fish ChV</u> (mg/l)
Water	60	11%	36	0.053
Soil	120	87%		
Sediment	540	2%		
Air	7.5	1%		

P2 Considerations and more information



(2) Detailed Results

(3) P2 Information

PBT Profiler Results for a PBT Chemical



[Methodology](#) · [Criteria](#) · [Definitions](#) · [Chemicals That Should Not be Profiled](#)

[Home](#) · [Start a New Profile](#) · [Results](#) · [Terms of Use](#) · [Security](#)



Results

Orange or red highlights indicate that the EPA [criteria](#) have been exceeded.
[Black-and-white version](#)

Persistence

Bioaccumulation

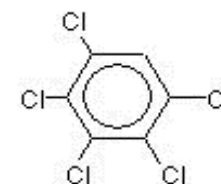
Toxicity

608-93-5 Benzene, pentachloro-

PBT Profiler Estimate = PBT




Screening estimates indicate this chemical may be a PBT - a P2 Assessment may allow further evaluation

<u>Media</u>	<u>Half-Life</u> (days)	<u>Percent in</u> <u>Each Medium</u>	<u>BCF</u>	<u>Fish ChV</u> (mg/l)
Water	180	2%	1,900	0.038
Soil	360	81%		
Sediment	1,600	15%		
Air	280	1%		






[P2 Considerations and more information](#)

PBT Profiler Has “Flags” for Some Chemicals That Should Not Be Profiled

-  **Known PBTs or POPs – already identified as a concern, test data exist**
-  **Mixtures – must have a representative structure to evaluate in model**
-  **Metals – no data for metals in models comprising PBT Profiler (EPI SuiteTM & Ecosar)**

Next Steps for the PBT Profiler

-  **Peer Review, following EPA's Peer Review Guidelines, is nearing completion.**
-  **PBT Profiler released to the public September 2002**
-  **Development of Profiler case studies and Internet site**



More Information – Web Sites and EPA Contacts

+ PBT Profiler discussed on P2 Framework web site:

- www.epa.gov/oppt/p2framework/docs/profile.htm

+ P2 Framework and Models Internet sites:

- www.epa.gov/oppt/p2framework
- www.epa.gov/opptintr/exposure/docs/episuite.htm
- www.epa.gov/opptintr/exposure/docs/screen.htm

+ Call or email EPA contacts to:

- Request workshop information or Fact Sheets
- Ask additional questions

Bill Waugh

Ph: 202-564-7657

waugh.bill@epa.gov

Maggie Wilson

Ph: 202-564-8924

wilson.maggie@epa.gov